

# Late onset depression: Issues in clinical care

Depression is the most common psychiatric illness of older people and is often undiagnosed.<sup>[1]</sup> It is not only the leading cause of suicide in older people but has a negative impact on quality of life and increases disability from other physical illness.<sup>[2]</sup> It is also an independent predictor of mortality.<sup>[3]</sup> Although effective treatment exists, depression is under-recognized and often undertreated.<sup>[4]</sup> The cut-off age varies across research articles. In the United Kingdom, 60 years of age is the most commonly used cut-off, whereas in the USA and other countries, 50 is generally used.<sup>[5]</sup> Research findings illustrated that late-onset depression may be associated with greater incidence of completed suicide<sup>[6]</sup> and a poorer outcome<sup>[7]</sup> than early-onset depression. Poorer outcomes may be related to neuropsychological deficits, which appear to occur more frequently in late onset depression.<sup>[8]</sup>

In a meta-analysis, the prevalence of clinically significant depression among older people living in the community was 13.5%.<sup>[1]</sup> Prevalence rates are at least doubled among patients with handicap or disability and those in hospital or nursing homes. Depressive symptoms are commonly present in chronic medical disorders, including heart disease<sup>[9]</sup> and chronic obstructive pulmonary disease.<sup>[10]</sup> There is possible neurobiological role in depression occurring in stroke, Parkinson's disease, and the dementias.

## ETIOLOGY

Early onset and late onset depression (EOD and LOD) are similar phenotypically, but differ etiologically.<sup>[11]</sup> Various factors have been proposed as explanations for the onset of depression in early or later life. Higher familial rate of depression than age-matched controls is seen in early-onset as well as late-onset depression but the rate in early-onset depression is higher.<sup>[12]</sup> 'Late-life depression' can be divided into subgroups with different etiological pathways, including early onset with long-standing psychological vulnerability, and late onset as

a reaction to severe life stress.<sup>[13]</sup> Theories explaining the association between depression and vascular disease are increased platelet aggregation,<sup>[14]</sup> atherosclerosis, and damage to end arteries supplying subcortical-striato-pallido-thalamo-cortical pathways which may disrupt the neurotransmitter circuitry involved in mood regulation, causing or predisposing to depression. It is also noticed that recurrent depression across the lifespan may increase the risk of vascular pathology.<sup>[5]</sup> An inverse correlation between hippocampal-entorhinal volume and years since onset of depression was seen which suggest that depression may result in neuronal alterations at a molecular level in hippocampal cells.<sup>[15]</sup> Lloyd *et al.*, found greater hippocampal atrophy in late-onset (after age 60) illness.<sup>[16]</sup> In a recent study, hippocampal surface contractions were significantly correlated with memory impairment among late-but not early-onset depressed patients or comparison subjects.<sup>[17]</sup>

## TYPES AND CLINICAL FEATURES OF DEPRESSION IN OLDER PEOPLE

Although 13.5% of older people are significantly depressed, the prevalence of depressive episode (major depression) is much lower, at around 2%.<sup>[1]</sup> Early recognition of late-onset depression can be difficult for patients, carers, and clinicians as the cardinal symptom of depressed mood may be less prominent in depression in old age.<sup>[18]</sup> Minor depression is perhaps characterised by more cognitive symptoms of depression and fewer somatic ones. Longer duration of symptoms, a personal history of depressive episodes, a serious suicide attempt, childhood events, a family history of depression, and high neuroticism are more often present in EOD, whereas decreased appetite/weight loss is more prominent at a higher age of onset.<sup>[19,20]</sup> In addition, elderly people with new or recurrent depression are more hypochondriacal, delusional, and tend to present more with symptoms of psychomotor change, anhedonia, cognitive impairments than younger people.<sup>[21]</sup> Vascular depression include apathy, psychomotor retardation, poor executive function on cognitive testing, less depressive thinking (such as guilt or unworthiness), and a late age at onset. The basis is thought to be ischemically-induced white matter changes.<sup>[5]</sup> Depression in all age groups is associated with some degree of impaired concentration and subjective difficulties with memory. Cognitive deficits seem to occur more frequently when first onset is in older age. There is also evidence that severity of cognitive deficits increases with severity of depression, regardless of age or

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education.<sup>[22]</sup>

## ASSESSMENT OF DEPRESSION IN LATER LIFE

The skills of history-taking, conducting a mental state examination, physical evaluation, and organization of relevant investigations are important. Given the increased likelihood of finding an organic condition contributing to depression with advancing age, these skills are arguably more important. The most widely validated screening instrument is the Geriatric Depression Scale.<sup>[23]</sup> Short and long versions and translations of the scale are available. The 5-item version has been validated in the community, hospitalized patients, and nursing-home residents.<sup>[24]</sup>

## MANAGEMENT ISSUES OF LATE ONSET DEPRESSION

The management of depressive disorder in older people should be multimodal (involving physical and psychological modalities along with social interventions) and multidisciplinary (with help from specialists such as nurses, social workers, and occupational therapists, and also dieticians, speech, and language therapists). Treatments that work are the same as for younger adults: Antidepressants, psychosocial and psychological interventions, or combinations of these, and electroconvulsive therapy (ECT).

In the assessment of patients presenting with depression occurring for the first time in late life, it is particularly important to consider neurological and vascular factors. Increased neurological findings in LOD emphasizes the importance of physical examination and thorough assessment of cognition.<sup>[25]</sup>

The National Institute for Health and Clinical Excellence (NICE) guidelines for depression recommend that people over the age of 65 should be offered a full range of psychological treatments, including cognitive-behavioral therapy (CBT) and supportive counseling.<sup>[26]</sup>

### Drug Treatment

Pharmacodynamics and pharmacokinetics alter with ageing and are also affected by concomitant medication and physical illness. This can lead to difficulty in predicting the target dose. The adage 'start low, go slow' then applies.

A recent trend is to prefer selective serotonin reuptake inhibitors (SSRIs) and venlafaxine because of a favorable adverse effects profile.<sup>[27]</sup> SSRIs may be less effective than tricyclics in in-patients with melancholic depression. Memory impairment is common symptom and often difficult to treat. The reduction in certain processing resources (working memory, processing speed) in LOD

patients appears to mediate impairments in episodic memory and naming capacity.<sup>[28]</sup> SSRI like Fluoxetine have high remission rates but incomplete improvement in memory impairment.<sup>[29]</sup> Anticholinergic side-effects of tricyclics, such as constipation, blurred vision, and dry mouth, can be very troublesome for elderly patients, and postural hypotension, cardiac arrhythmia or overdose can be very dangerous. Sertraline and citalopram have the least potential for drug interactions. Venlafaxine is an effective drug in this age group and is generally well tolerated, particularly if the dose is increased slowly. How long to continue maintenance therapy is not clear. A recent expert consensus statement suggests that after a first episode of major depression a majority of clinicians opt to keep the patient on continuation treatment for at least 1 year.

### Psychological Interventions

Older patients with depression are rarely offered a psychological intervention. In a large primary-care-based study, in which a treatment choice was offered to older patients with depression, 50% expressed a preference for a psychological approach over drugs.<sup>[30]</sup> CBT is the best established treatment in depression and good evidence exists for its effectiveness in older adults.<sup>[31]</sup> Interpersonal therapy is also effective in relapse prevention.

### Electroconvulsive Therapy

ECT remains the most effective treatment available for severe depression particularly psychotic depression, with a recovery rate in the region of 80%. Its use is generally reserved for when there is a threat to life due to insufficient dietary intake or suicidal behavior, or if treatment with antidepressants has been ineffective.<sup>[4]</sup> There are no absolute contraindications, but a review of medical risk by a senior anesthetist is advisable.

Clinicians should recognise that LOD differs from the EOD. LOD is more commonly associated with cognitive impairments that complicate management. An increase in the occurrence of vascular disease in elderly people may complicate the clinical picture. Memory problems associated with depression may affect recall of symptom onset. Study of outcomes and underlying pathophysiological mechanisms might lead to the development of treatment modalities involving coping strategies.

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